CLAIMS

What is claimed is:

1. A system in a device having at least one application data destination having a format, comprising:

a difference engine receiving difference information associated with a change to said at least one application data destination; and

an application interface, applying said difference information to said at least one data destination.

2. The application of claim 1 wherein said difference engine comprises:

a data store reflecting application data at a state prior to receipt of said difference information; and

a delta engine receiving difference information and comparing difference information to said data store to construct change information.

3. The application of claim 2 wherein the difference information comprises a data file containing change transactions which is combined with data in the data store.

4. The application of claim 2 wherein said application interface applies said combined data to said application data destination.

5. The application of claim 4 wherein said application interface

receives change information in a universal data format.

6. The application of claim 1 wherein said application interface comprises an input receiving universal format data from said difference engine and an output to said application data destination format.

7. The application of claim 6 further including a plurality of application interfaces for a plurality of application data destination formats.

8. The application of claim 1 further including a decryption routine.

9. The application of claim 8 wherein the decryption routine decrypts the difference information prior to input to the difference engine.

10. The application of claim 1 further including a compression routine.

11. The application of claim 10 wherein the compression routine decompresses the difference information prior to input to the difference engine.

12. The application of claim 1 wherein the application interface includes an extraction interface having an application data destination format input and a universal data format output, and the differencing engine includes a universal data input and a difference information output.

13. The application of claim 12 wherein the device is coupled to a network, difference engine includes a network interface and wherein the difference engine outputs difference information via said network interface.

14. The application of claim 1 wherein the device is coupled to a network and difference engine includes a network interface.

15. The application of claim 14 wherein the difference engine receives said difference information via said network interface.

16. The application of claim 1 further including a versioning module coupled to the difference engine.

17. The application of claim 16 wherein the versioning module determines a version of said difference information.

18. The application of claim 1 further including an event trigger.

19. The application of claim 18 wherein the event trigger enables receipt of said difference information by the application.

20. An application for applying changes to data from a source to

a destination having a destination format, comprising:

a difference information selection routine; and

a difference reconstruction routine.

21. The application of claim 20 wherein the difference information selection routine includes:

a data store reflecting the state of the data prior to receipt of said difference information; and

a delta engine receiving difference information and comparing difference information to said data store to construct changed information.

22. The application of claim 21 wherein the difference information comprises a set of transactions which is compared to the data store.

23. The application of claim 21 wherein said difference information reconstruction routine includes a translator receiving changed information in a universal format data from said difference information selection routine and outputting changes to said data in the destination format.

24. The application of claim 23 further including a plurality of application interfaces for a plurality of destination formats.

25. The application of claim 20 further including:

a construction routine having an extraction interface including an destination format input and a universal data format output, and wherein

said difference information selection routine reads said universal data output to generate change transactions indicating changes to the destination data.

26. The application of claim 25 wherein the device is coupled to a network, the difference engine includes a network interface and wherein the difference engine outputs change transactions via said network interface.

27. The application of claim 21 wherein the device is coupled to a network and difference engine includes a network interface.

28. The application of claim 21 wherein the difference information selection routine receives said difference information via said network interface.

29. A method for updating data files in a system, comprising:

(A) receiving difference information for a subset of said data files; and

(B) applying said difference information to said subset of said data files.

30. The method of claim 29 wherein said step of receiving comprises:

(i) receiving a change log detailing changes to data files on another system; and

(ii) applying said changes to a data store containing data identical to said data files to generate changed data.

31. The method of claim 30 wherein said step (i) comprises generating changes to said data in a universal data format.

32. The method of claim 31 wherein said step (B) comprises:

converting said changes in said universal data format to an application specific format; and

updating said data with changes to said data.

33. An application in a system having a data source in a source format, comprising:

an application interface, extracting data from said data source; and

a difference engine receiving said data and outputting difference information associated with changes to said data source.

34. The application of claim 33 wherein the application interface includes a source format interface; and

a converter to map said data from said source format into a universal format.

35. The application of claim 33 wherein said difference engine comprises:

a data store reflecting a prior state of said data; and

a delta generator comparing said data and said data store to provide change transactions.

36. The application of claim 34 wherein said application interface extracts data from said data source.

37. The application of claim 36 wherein said application interface converts source data to a universal data format.

38. The application of claim 33 wherein said application interface includes an input receiving source format data and an output providing universal format data.

39. The application of claim 35 further including a plurality of source format interfaces for a plurality of source formats.

40. The application of claim 33 further including a decryption routine.

41. The application of claim 40 wherein the decryption routine decrypts the difference information following output from the difference engine.

42. The application of claim 33 further including a compression routine.

43. The application of claim 42 wherein the compression routine decompresses the difference information following output from the difference engine.

44. The application of claim 33 wherein the application interface includes an reconstruction interface having a source format output and a universal data format input, and the differencing engine includes a universal data output and a source format input.

45. The application of claim 44 wherein the device is coupled to a network, difference engine includes a network interface and wherein the difference engine receives difference information via said network interface.

46. The application of claim 33 wherein the device is coupled to a network and difference engine includes a network interface.

47. The application of claim 46 wherein the difference engine outputs said difference information via said network interface.

48. The application of claim 33 further including a versioning module coupled to the difference engine.

49. The application of claim 48 wherein the versioning module

determines a version of said difference information.

50. The application of claim 33 further including an event trigger.

51. The application of claim 50 wherein the event trigger enables receipt of said difference information by the application.

52. An application in a device for distributing changes made to device data in a system specific format, comprising:

a device data extraction routine; and

a change transaction generation routine.

53. The application of claim 52 wherein the change transaction generation routine includes:

a data store reflecting the state of the device data prior to generation of said change transactions; and

a delta engine generating change transactions by comparing said data to said data store to construct change transactions.

54. The application of claim 52 wherein said device data extraction routine includes a translator reading changes to said data in the system specific format and outputting change information in a universal data format.

55. The application of claim 54 further including a plurality of

application interfaces for a plurality of system specific formats.

56. The application of claim 52 further including:

a construction routine having an extraction interface including an system specific format input and a universal data format output, and wherein said change transaction generation routine reads said universal data output to generate change transactions for said data.

57. The application of claim 56 wherein the device is coupled to a network, the change log generation routine includes a network interface and wherein the change log generation routine outputs difference information via said network interface.

58. The application of claim 52 further including:

code for applying change transactions to the device data from a source in the system specific format, comprising:

a difference information selection routine;

a database reflecting the state of the data at state prior to receipt of source difference information; and

a delta engine receiving source difference information and comparing difference information to said database to construct change information for the device data; and

a difference reconstruction routine applying the change information to the device data.

59. A method for updating a data source in a system, comprising:

extracting difference information from at least a subset of said data source; and

outputting difference information for at least the subset of said data source.

60. The method of claim 59 wherein said step of outputting comprises:

determining whether changes have been made to the subset of data source in the system; and

generating a change log detailing changes to the subset of data source on another system.

61. The method of claim 59 wherein said step of determining comprises:

comparing data from said subset of data source to a data store reflecting a previous state of the data source.

62. The method of claim 59 wherein said generating step comprises generating changes to said data in a universal data format.

63. The method of claim 62 further including the step of:

receiving change information for said data source;

converting said change information into updated source data; and

updating said source with changes to said updated source data.

64. An application in a system containing a plurality of data files, comprising:

an extraction routine for extracting a first set of difference information resulting from changes to the data files;

a differencing transmitter for transmitting said first set of difference information to an output;

a differencing receiver for receiving a second set of difference information from an input; and

a reconstruction routine for applying the second set of difference information to the data files.

65. The application of claim 64 wherein said difference routine comprises:

a data store reflecting the state of the data files at a state prior to receipt of said difference information; and

a delta engine receiving difference information and comparing difference information to said data store to construct change information.

66. The application of claim 64 further including a decryption routine.

67. The application of claim 64 further including a compression routine.

68. The application of claim 64 wherein the system is coupled to a network, and the first and second set of difference information is received

from and output to the network.

69. The application of claim 64 further including a versioning module coupled to the difference engine.

70. A method for updating data files in a system, comprising

receiving first change transactions for a subset of said data files;

applying said change transactions to said subset of said data files.

subsequent to a change in said data files, generating second change transactions for said files; and

outputting said second change transactions to an output.

71. The method of claim 70 wherein said receiving step comprises parsing a data stream to extract change transactions identified for the subset of said data files.

72. The method of claim 70 wherein said step of applying comprises comparing said change transactions to a data store including data in said subset of data files.

73. The method of claim 72 wherein said data store includes said data in a universal data format.

74. The method of claim 70 wherein said step of generating includes assigning a universal identification to each change transaction.

75. The method of claim 74 further including the step of identifying each change transaction with a version.

76. A device engine, comprising:

an application object;

an application object store; and

a delta module.

77. The device engine of claim 76 including a plurality of application objects.

78. The device engine of claim 77 further including a compression algorithm.

79. The device engine of claim 78 further including an encryption algorithm.

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